In an effort to shed some factual light on the part played by social and cultural factors in mental disorder, this author appraises the current status of research between socio-cultural variables and mental disorder by summarizing and evaluating recent empirical studies of these relationships. Consideration is given to demographic, ecological, cross-cultural, social stratification, and social mobility studies as well as to social factors and psychiatric treatment.

SOCIO-CULTURAL FACTORS IN MENTAL DISORDER

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In recent years discussions of mental disorder have tended to ascribe increasingly greater importance to the part played by social and cultural variables in the determination of such disorders. Yet a heavy proportion of the data upon which such predilections are based have been strongly impressionistic and of unknown reliability. Of late, however, the volume of empirical investigations into such relationships has been steadily on the increase with the result that a comprehensive survey of this research can be expected to shed some factual light upon the topics at issue.

The present paper, then, represents an effort to appraise the current status of research into the relationships between socio-cultural variables and mental disorder by drawing together in summary form and collectively evaluating a number of recent empirical studies of these relationships. Only investigations of those mental disorders traditionally and commonly labelled functional or psychogenic will be considered. So-called "structural" psychoses, psychosomatic disorders, alcoholism and addictions, and delinquency are not specifically treated.

DEMOGRAPHIC STUDIES

The oldest (as well as crudest) type of study relating social factors to mental disorder is that which breaks down incidences of mental disorder according to gross demographic variables (e.g., race, age, sex, etc.) in an effort to reveal any differential trends. These studies have received ample review elsewhere (Felix & Kramer, 1953; Rose & Stub, 1955) so that it is unnecessary to treat them here at any length. In sum the findings of these researches may be roughly characterized as follows: (The demographic incidence of schizophrenia has been found to be roughly the same as that of all mental disorders taken collectively [i.e., total incidence]. Hence the summary which follows applies both to total incidence and to schizophrenia alone).

In general mental disorder is reported as more frequent among foreign born and Negro groups (especially when these groups form a minority within their residential location). They are less frequent in females than in males. The most frequent age at onset for schizophrenia lies within the age range 20–35 (this range will be somewhat higher in the case of total incidence). Finally mental disorder is, on the whole, more common among the unmarried (at least for males—there being some tendency for the reverse to hold for females).

In manic-depressive psychosis virtually all the findings pertaining to schizophrenia and total incidence may either be reversed or are ambiguous as to direction. There are no reliable data on the demography of the neuroses.

ECOLOGICAL STUDIES

Among the most influential studies of social factors and mental disorder have been the early, pioneer ecological analyses of psy-

chiatric disturbance. Since, like the demographic literature, these have already been adequately reviewed, by Queen (1940) and also by Dunham (1955), we shall no more than cite the general findings here. It is well to note first that ecological studies of mental disorder, by and large, amount to explorations of relationships between these disorders and a variety of environmental factors none of which is *necessarily* presumed to be of causal significance. However, such studies can, and have, operated as points of departure for more particular investigation of possible etiological agents.

Of the studies surveyed by Queen (1940), a total of four, all are generally consistent in finding that institutionalized mental patients (first admissions) come "predominantly from areas of dense population, low economic status and high delinquency rates, most of which areas surround the central business district" (p. 203). This general pattern is, however, clearest in the earliest study of the group, the Chicago study by Faris and Dunham (1939). As Queen points out, "these are areas characterized by rooming houses, converted tenements, poverty and high death rates" (1940, p. 205). Further, mobility appears high and social participation low within such districts. Such an ecological distribution is especially evident for schizophrenia.

On the other hand there is no good evidence for any kind of regular pattern for manic-depressives. What trends are present are similar to those concerning the demography of these disorders—i.e., opposite to those of schizophrenia.

CROSS-CULTURAL STUDIES

It is currently popular to suppose that gross and often qualitative differences in the incidence of mental disorder obtain between cultures. Weinberg (1952), for instance, asserts that schizophrenia is less frequent in cultures that are homogeneous and have intimate contacts than in cultures which are heterogeneous and have impersonal and hostile contacts. Thus he assumes, along with Ruesch, Jacobson, & Loeb (1948), that stresses and strains of acculturation form "one source of illness." However a review of the available literature strongly suggests that Demerath's conclusion that "the rarity or absence of schizophrenia among truly primitive peoples generally has simply not been established" (1955, p. 221), may be safely generalized to include all forms of mental disorders.

Indeed, Linton (1956), after a careful review of the literature supplemented by his own extensive anthropological experience, is able to identify only two types of psychoses which seem to be specifically localized: Witigo, a cannibalistic phenomenon found among certain North-Canadian Indians and Koro, a bizarre manifestation centering about a fear that the penis will withdraw into the abdomen and found exclusively among natives of the Malay archipelago. Moreover it is questionable whether these disorders represent, at base, unique pathologies or only a symptomatology closely conditioned by peculiar environmental complexes.

Linton concludes that while symptoms may vary with the culture "all the fundamental types of psychosis which are recognized by Europeans also occur in other societies" (1956, p. 70) and proceeds to suggest a physiological basis for all psychosis. Further, whereas the behavior of neurotics is much more thoroughly culturally conditioned, it also appears to be universally present, again leading Linton to suspect an underlying constitutional base.

Likewise Seward (1956) recognizes variations in pathological manifestations from culture to culture (and also from era to era) but is unconvinced as to whether these reflect variations in basic pathology.

What systematic evidence is available does indicate differential incidence rates (between cultures) for specific disorders. These data are somewhat difficult to evaluate however, for as Linton points out (1956) there are serious methodological problems inherent in cross-cultural comparisons. In the first place most non-literate societies have little in the way of facilities for the care of the mentally disordered. As a consequence systematic surveys are difficult to execute. Moreover, even an actual census of mental disorder among primitive groups may be misleading because it is likely "that only a

few harmless psychotics can survive for any length of time in a primitive society" (1956, p. 80). Consequently incidence rates may appear spuriously low among such groups. These difficulties are even more acute with respect to neurotics who, as Linton observes, can often get along fairly well in society and especially in simple societies, and hence not be recognized as "mental cases."

With these cautions in mind we may proceed to a brief summary of the two most extensive surveys of the incidence of mental disorder in non-literate societies. One of these, Carothers (1953), concerns itself with African groups and the other, Stainbrook (1952), with Negroes of Bahia, Brazil.

Total incidence among African tribes when compared with 1938 figures for England and Wales range from about four to about 100 times fewer with an average rate about 10 times less than the English. Roughly the same ratios hold for first admissions.

With respect to sex differences in Africa, male psychotics are much more frequent than female. Regarding age incidence, Carothers suggests that the young adult group forms a greater proportion of first admissions than is true in America.

Turning to relative incidences of particular disorders the picture becomes quite uncertain as a result of the vagueness, arbitrariness and dependence upon gross behavioral symptoms of most diagnostic categories. Further the fact that nosological labels are frequently applied according to individual preferences of the diagnosticians complicates any comparative analysis terribly.

Within the bounds of such limitations, Carother's data indicate that paranoia and paranoid schizophrenia are relatively rare among Africans. Likewise neither manic nor depressive psychoses are common and when they do occur manic states greatly outnumber depressives.

Stainbrook's data are comparable with and enlarge somewhat upon those of Carothers. Of his hospitalized Brazilian patients about 80% came from rural areas. Lower class patients comprised 85% of the hospitalized cases, the rest being middle class (a finding comparable to results reported below). Stainbrook reports that among the institutionalized schizophrenics, even the catatonics were rarely as withdrawn as is frequently the case in European hospitals.

In sum then, these studies provide evidence of extensive cultural variability in the *expression* of mental disorder. However the general interpretation of the data, and especially in regard to inferences concerning basic pathology, is far from certain.

SOCIAL STRATIFICATION STUDIES

Lately a variety of empirical investigations have appeared in the literature, many of them designed to elucidate further some specific implications of the previously mentioned ecological studies. Probably the most popular of these involves an examination of relationships between various indices of social position (status) and mental disorders. Inasmuch as such studies have not recieved an extensive review elsewhere they are summarized here in some detail.

Undoubtedly the most extensive and elegantly designed studies of this kind are those conducted by the interdisciplinary team headed by A. B. Hollingshead and F. C. Redlich at Yale.[1] These investigators first mapped out the class structure of the New Haven, Connecticut community and derived an Index of Social Position which yields five social class strata, each defined in terms of occupation, education and area of residence. A psychiatric census was then conducted to determine the number and kinds of patients in the community and a large amount of information was gathered on each patient. What is of particular note in the work of these investigators is the use of a normal control sample and control for population distribution of social class membership.

The investigators take pains to point out that their results have reference only to diagnosed or treated and not "true" incidences. Within such groups they report (1953) that as a whole the psychiatric population falls lower on the status scale as compared with the normal control sample. Moreover, neurosis (total incidence) is more frequent in upper status groups and psychosis (total in-

[1] The results of these studies are now available in: Hollingshead, A. B. & Redlich, F. C. *Social class and mental disorder.* New York: Wiley, 1958.

cidence) is more common among lower status groups. This latter finding is especially marked in regard to schizophrenia.

Elsewhere Hollingshead and Redlich report the incidence of treated schizophrenia to be 11 times more frequent (even when adjusted for population distribution of class membership) in the lowest social class as compared with the highest (1954b). In still another paper (1954a) these investigators report the incidence of treated schizophrenia to be an inverse function of social class position, prevalence increasing with descent down the status scale.

Consistent with the New Haven studies, Tietze, Lemkau, & Cooper (1942a) find a greater incidence of schizophrenia among lower status groups. These authors also report manic-depressive psychosis to be more frequent among upper-class members. In addition they suggest a tendency for schizophrenia to be more prevalent in urban areas and manic-depressive disorders in rural areas. This last finding would of course be expected from the ecological studies cited previously.

Frumkin (1955) examined 1192 male and 347 female first admissions to Ohio hospitals and found rates of first admissions to be inversely related to prestige and socio-economic status as these are reflected in occupation. This picture was most evident with respect to the prestige dimension of occupational status.

In a similar study Clark (1949) classified 12,168 cases of male first admissions to mental hospitals in Chicago into 19 occupational groups ranging from "large owners professional" through "salesmen" to "errand and office boys." He then calculated age—adjusted rates for each group, ranked each according to psychosis rate, income, and prestige and then computed rank difference correlations. Like Frumkin he found low psychosis rates to be associated with high occupational prestige and income and high rates with low occupational prestige and income (rho = $-.75$). Negro rates were generally higher than white rates.

Similar correlations are reported when specific psychoses are taken separately with the exception of manic-depressive psychosis which correlated approximately zero with prestige and income. Hence, unlike Tietze, Clark finds no relation between status and manic-depressive disorders.

With regard to the relationship between neurosis and socio-economic status, Rose and Stub (1955) conclude that there seems to be no generalized, consistent pattern though there are some suggestions of a positive relationship between total incidence and occupational status and income.

Weinberg (1952), on the other hand, feels it to be possible that hysteria is more common in the lower social classes and obsessive-compulsive reactions more prevalent among upper class groups. (There is however an extreme paucity of data bearing upon this question with the result that a definitive statement is hardly possible.)

One final study might be mentioned though the reliability and generality of its findings are uncertain. Stevens (1954), dealing with children, reports a greater incidence of behavior problems (undifferentiated) among lower class children. However the prevalence of "withdrawn" behavior appeared to be greater among upper class children. Whether these findings are peculiar to the Stevens sample can only be determined by other investigations utilizing independent samples. At any rate the study of status factors in the incidence of mental disorder among children appears to be a fertile field for future research.

The results of stratification studies may be grossly summarized as follows: It seems reasonably well established that the total incidence of psychosis (and perhaps of mental disorders generally) is greater among the lower as compared with upper classes. This conclusion seems especially true of schizophrenia. The data concerning any status-specific differential in the incidence of manic-depressive psychosis and of the neuroses are contradictory and on the whole quite uncertain. It remains possible, however, that the results of these studies may be attenuated by unreliability of diagnostic procedures. It may be that whether a given patient is classified as, say schizophrenic when diagnosis is uncertain, will be in some measure a function of his social status. If this is true the studies reviewed above would,

in part at least, refer only to status factors in the *diagnosis* of mental disorder.

SOCIAL MOBILITY STUDIES

Another type of investigation, largely motivated by the earlier ecological studies, attempts to ascertain relationships between incidences of mental disorder and spatial or social mobility. Spatial or geographic mobility refers to movement from one place of residence to another while social or status mobility has to do with movement along a status dimension. For example, Tietze et al. (1942b) refer to the fact that previous (ecological) studies have shown various psychoses, especially schizophrenia, to be more frequent in city areas where people move more frequently than in more stable areas. They then examined the records of 1022 patients gathered from a previous study in Baltimore for incidence rates and mobility factors.

They report rates of psychosis, adult neurosis, psychopathic personality and child behavior problems to be highest among Jews, with Negroes generally lower than whites. Further, the highest prevalences of mental disorders occurred among people living for the shortest time in the same house. Moreover, intra-city mobility seemed more important than inter-community migration.

Hollingshead and Redlich (1954a) compared native-born patients as to place of birth and class position in an effort to determine any relationship between status and geographic mobility. No significant relationship was found.

In the same study Hollingshead and Redlich compared the nativity of adult patients with that of the total population and found no notable differences. Hence immigration would appear not to be a significant variable in mental disorder, as the Tietze et al. research would also imply. Hollingshead and Redlich also report no trend for schizophrenics to change their ecological areas of residence. Residential histories indicated that schizophrenic patients generally have lived in the same *type* of ecological area all of their lives. These findings do not contradict those of Tietze et al. cited above since it is still possible for an individual to change his domicile frequently but always remain within the same *type* of ecological area.

With respect to social mobility, Hollingshead and Redlich (1954b) failed to confirm the hypothesis that schizophrenics were downwardly mobile. Ninety-one per cent of the patients studied were in the same social class as their parents as determined by rating patient and parental status levels according to Hollingshead's Index of Social Position (see above). Any discrepancy then would be an index of mobility. In fact these investigators report that among patients who do change their class position, most are upward mobile.

In an effort to explore this last finding more fully, Hollingshead, Ellis and Kirby (1954) studied the differences in achieved social mobility (determined as above) between non-patients, neurotics and psychotics. On the assumption that any differences would be clearer in non-adjacent classes their sample was restricted to classes III and V. Class III (higher) was found to be generally more mobile than class V and almost entirely upward. Neurotics were more mobile than non-patients and schizophrenics were most mobile of all groups (these relationships hold when adjusted for parental origin). From these results the authors infer neurotics and schizophrenics to be "over-achievers" or status-strivers. This latter conclusion is, however, as yet unverified.

Ellis (1952) attempted to test the hypotheses that mobility is frequently inspired at least partly by emotional drives generated by unsatisfactory primary group relations and that mobility leads to further deterioration of primary group relations with accompanying neurotic symptoms. Only the second of these two hypotheses will be considered here. It should be noted, however, that Ellis attempts to take a step beyond the usual study in this area by suggesting a possible mechanism by which mobility influences mental disorder (i.e., disturbances in primary group relations).

Movement in Ellis' study is defined in terms of occupation, taken as an index of social status. She studied a total of 60 female subjects (career women) who were divided

into mobile (N = 27) and non-mobile (N = 33) groups by comparing the status level of their own occupation with that of their fathers (both rated by North's and Hatt's method modified to accommodate women's occupations). Mobility was then defined as a scale discrepancy between the two ratings of 10 or more points (in either direction). Finally each S was personally interviewed to obtain relevant data.

Ellis found a significantly larger proportion of mobile women to have relatively severe psychosomatic (presumed) symptoms. These data were obtained by asking each respondent for a description of her health problems. In addition self-ratings of adulthood happiness were obtained but failed to differentiate between mobile and non-mobile groups. Ellis concluded that her findings afford some support to the hypothesis tested. It would seem, however, that a more cautious conclusion is in order in the light of the fact that the evaluation of the respondent's symptoms as psychosomatic was entirely subjective and because some question could be raised as to whether such symptoms are equatable with "neurotic tendencies." Moreover, the hypothesis concerning effects of primary group relations must be considered unverified.

Summarizing then, there is evidence that patient groups generally tend to be more socially mobile (upward) than non-patients. Whether this tendency holds for all types of patient groups is not certain as yet. Spatial or geographic mobility may also be more frequent among patient groups though further investigation will be necessary for confirmation of this trend. It also appears that immigration and inter-city migration are unrelated to mental disorder.

SOCIAL FACTORS AND PSYCHIATRIC TREATMENT

While not strictly related to the question of the relationships between socio-cultural factors and the incidence of mental disorder, the volume of recent studies relating treatment of such disorders to social variables serves to round out the overall picture and also bears upon the interpretation of some of the findings reported above.

In two studies of the treatment of schizophrenics, Hollingshead and Redlich (1954a; 1954b) found the type of therapy given (psychotherapy, organic therapy, custodial care) to vary as a function of the patient's social status. Upper class patients received psychotherapy more frequently and lower class patients rarely. Lower class patients on the other hand most frequently received no treatment (custodial care). Moreover, when treated, lower class patients were treated over a considerably shorter time span. In addition the lower class schizophrenic was more likely to end up in treatment through the instrumentality of the law and was also less likely to be in non-public treatment settings.

Robinson, Redlich and Myers (1954) explored these issues further with a N of 1963 patients and confirmed the Hollingshead-Redlich results. They report that the upper class patient (all types) is most likely to receive psychotherapy (this refers to classes I and II and to a lesser degree III). The lower class patient in contrast will be more likely to receive organic treatment or no treatment, with classes IV and V most likely to receive no treatment at all.

Thus it would appear that type of treatment is clearly a function of class position. This trend is especially marked when only neurotics are considered, is very marked for intoxications and addictions, and is clearly present in schizophrenia and paranoid conditions (Robinson et al., 1954).

Similarly the type of psychotherapy given (psychoanalysis, analytic psychotherapy, eclectic therapy, relationship therapy, group therapy) was found to be a function of social position. Thus if psychotherapy was received at all, the lower class patient was most likely to receive group therapy and never full psychoanalysis which was virtually confined to the top status levels (Robinson et al., 1954).

Working in an out-patient setting, Myers and Schaffer (1954) studied the relationship between social class and psychiatric treatment in a setting where the only therapy done was psychotherapy and where the bulk of the caseload were neurotics. One of their purposes was to explore the possibility of an

economic interpretation of Hollingshead and Redlich's results. The clinic involved limits its caseload to persons having annual incomes of $5,000 or less and fees are nominal.

Investigating a total of 195 patients these workers found that whether, after initial intake, a patient was recommended for treatment was directly related to his social class position. Lower class patients were much less likely to be accepted for treatment and if accepted were unlikely to be seen by staff members high on a professional status dimension. That is, upper class patients tended, on the whole, to be seen in psychotherapy by staff or resident psychiatrists while lower class patients would be most likely seen by medical students taking a brief practicum at the clinic.

In addition it was found that the higher the class position the longer the treatment as measured by number of interviews and the more intense the treatment as measured by frequency of interviews. These last findings would of course largely follow from the fact that the lower class patients who received psychotherapy received it at the hands of medical students each of whom remained at the clinic for only a brief time. Myers and Schaffer conclude that their results afford little comfort to an economic interpretation of such relationships.

Auld and Myers (1954) have further confirmed this relationship between length of psychotherapeutic treatment and social class position.

Likewise Winder and Hersko (1955) found a moderate relationship between length of psychotherapeutic treatment and social status in a study of 100 male patients selected at random from a pool of 1250 patients in a V. A. mental hygienic clinic. Of these 100 cases, 68 were diagnosed neurotic, 17 psychotic and 15 organic. Each was rated for social status according to Hollingshead's scale. The investigators also report that of two types of psychotherapy offered in this clinic, analytic and relationship (supportive, etc.), higher class patients were more likely to receive analytic-type therapy.

On the other hand, in a study of 248 closed cases in a child guidance clinic, Hunt, Gurrslin and Roach (1958) found no relationship between length of psychotherapeutic treatment and the social-class position of the patient. Social class position was rated according to the occupational scale of Hollingshead's Two Factor Index of Social Position, yielding a 7-fold classification. In addition, Hunt et al. rated clinic personnel along a seven point scale of professional status ranging from psychiatrist at the top to student social worker at the bottom. No relationship was found between the professional status of the therapist and length of treatment in this clinic.

But these authors report a correlation of .50 between the social status of the patient and the professional status of the therapist. They conclude that a substantial relationship exists between patient and therapist status levels.

Hence the available literature suggests that the likelihood of receiving any kind of treatment for mental disorder is an increasing function of social class position. It is also becoming apparent that lower class patients are less likely to receive psychotherapy as a form of treatment and rarely, if ever, receive the most highly regarded type of psychotherapy—i.e., psychoanalysis. Moreover, what treatment lower class patients do receive appears likely to be less extensive and intensive than that received by their higher class counterparts. Finally, if one assumes a considerable positive correlation between professional status and professional skill, the Hunt et al. and Myers and Schaffer data would indicate that lower class patients receive, in general, an inferior quality of treatment.

A variety of explanatory hypotheses have been offered to account for these results, especially in regard to the psychotherapy findings, (e.g., convergence or lack thereof between patient and therapist value and communication systems). However, to date, what actual investigations have been carried out in this field appear to have been exclusively empirical or parametric. Quite obviously more detailed theoretically oriented investigations are called for.

DISCUSSION

It was previously noted that in addition to their intrinsic interest the studies concerning social factors and the treatment of

mental disorders have an important bearing upon the interpretation of studies relating social factors to incidence rate. For example, as Hollingshead and Redlich observe (1954b), the fact that upper and middle class schizophrenics tend to enter treatment earlier and are more likely to be treated effectively and permanently discharged from hospitals while the lower class schizophrenic is likely to become a permanent resident of the hospital will tend to have a cumulative effect upon statistics of class-specific incidences based upon institutionalized populations. Such a factor might serve to seriously distort observed incidences relative to their actual or "true" rates.

In the instance just mentioned the effect could be an overestimation of lower class schizophrenia rates as compared with higher class rates. The fact that many studies indicate that higher class persons are more likely to become patients (especially in out-patient settings) could have an opposite effect—an underestimate of lower class incidence rates. Several recent studies (Michigan Department of Mental Health, 1955; Roach et al., 1958; Stevens, 1954) indicate differential utilization of out-patient facilities as a function of social class position with considerably higher rates of utilization among the upper status groups. Roach, Gurrslin, and Hunt (1958) compared rates of utilization of the facilities of an out-patient child guidance clinic with appropriate population distributions for a number of descriptive characteristics of the clinic caseload. Among the results of this study were findings that Negroes, Catholics, and lower class persons generally (as assessed by occupation and area of residence) were significantly (chi-square) under-represented in the clinic population. Upper status groups and Jews were found to be significantly over-represented. From this Roach et al. conclude that "It is clear that the clientele served (by this clinic) represents primarily a white, Protestant group of middle to high socio-economic status," and point out the consistency of their results with those of other similar studies.

Consequently considerable caution should be exercised in generalizing from available incidence studies based on "treated" and/or institutionalized cases because of these possibilities of biasing factors. Still it seems quite unlikely that the results of such studies can be entirely "explained away" by referring to possible sampling errors.

Another interpretive problem surrounding these studies concerns the precise nature of the relationship between the social factors studied and the mental disorders to which they are related. It is obviously tempting to execute an inferential leap and attribute causal significance to these variables, though no such significance has been established. Frumkin (1955), for example, on the basis of his study of the relationship between occupational status and mental disorder, concludes that lower-class occupational groups develop mental illnesses which are largely "sociogenic," upper class groups develop illnesses which are mainly "psychogenic" and middle class groups "socio-psychogenic" disorders. Frumkin further asserts that "while psychogenic factors are important in the development of mental illness, sociogenic factors as evidenced in the socio-pathic features of our social structure are mainly responsible for growing rates of mental illness" (1955, p. 160). A careful search of the available literature, however, reveals no substantial support for such etiological assertions and in fact, there is some evidence against Frumkin's premise of "growing rates of mental illness." In truth, what Frumkin's asserted conclusions amount to is no more than a statement of his own preferences among alternative hypotheses (the alternatives being, of course, left unspecified). Indeed other investigators operating in this same general area have been led to emphasize the operation of physiological-constitutional variables in the etiology of mental disorder (see Linton, 1956; Tooth, 1950). The frequency with which workers in this area are prone to commit the fundamental methodological error of assuming causation from correlation is actually a bit disquieting. As a result, it warrants emphasizing that no particular kinds of etiological factors have, as yet, been demonstrated in the types of studies reviewed here. As was indicated previously, most of these investigations have their foundations in the earlier general ecological studies and represent more circumscribed

efforts at determining which of a number of possibilities raised by the earlier researches are of greater importance, (e.g., mobility, status, etc.). And in point of fact Dunham, one of the pioneers of this field, is even skeptical about the degree to which ecological studies can contribute to any specific understanding of the etiology of mental disorders (1955).

Yet these studies can provide a rich source of hypotheses concerning the observed correlations between social variables and mental disorders. Several such hypotheses have already been investigated.

In attempting to account for the results of studies on the ecology of mental disorder, three main propositions have been advanced. The first of these, the "drift" hypothesis, attempts to explain the findings away by arguing that the mentally disturbed (particularly schizophrenics) will, as a consequence of their disturbance, be unable to function effectively in society, eventually become downward mobile and thence "drift" into the poorer urban residential areas in sufficient proportions to account for observed incidence rates. Dunham (1955) has been critical of this explanation and several investigators have put the "drift" hypothesis to empirical test. Hollingshead and Redlich's data (1954a; 1954b), while indicating that patients are frequently more mobile than nonpatients, reveal no evidence for the drift hypothesis. Firstly, what mobility is observed is predominantly *upward* and secondly, there is no evidence that schizophrenics, at least, have drifted from better to poorer residential areas. Most schizophrenics were found always to have lived in the same type of ecological area. Hence the "drift" hypothesis does not appear to be a tenable explanation of the ecology of mental disorder.

A second hypothesis which has been constructed, especially as regarding schizophrenics, has been called the "social isolation" hypothesis. Jaco (1954), for instance, who treats social factors as "precipitating variables" in mental disorders, tested the proposition that "those communities having high rates of schizophrenia will have a concomitantly high degree of social isolation" (1954, p. 568). Social isolation was defined as "the cutting off or minimizing of contact and communication with others." Jaco then proceeded to compare communities showing the highest and the lowest rates of schizophrenia. Also, on the ground that social isolation is an etiological variable specific to schizophrenia, he compared communities showing highest and lowest rates of manic and depressive psychoses.

Significant differences were reported in the direction hypothesized on a number of variables presumed to reflect social isolation, such as, knowing names of neighbors, number of acquaintances, membership in lodges and fraternities, visits with friends, etc. Moreover, the differences obtained were only with regard to schizophrenia so that Jaco concludes that both propositions are confirmed.

Even if the reliability of Jaco's findings is accepted (he himself admits his indices to be crude) interpretive problems are still present. It must be borne in mind that only the concomitant variation between high and low schizophrenia rates on the one hand and high and low "social isolation" on the other has been elucidated. No specific etiological mechanism has been demonstrated. Further, while Jaco does not treat social isolation as a sufficient cause (nor even necessary, really), there still remains the problem of why all members of high isolation areas do not develop schizophrenia and also why any in the low area do so.

All things considered it would seem wisest, pending the outcome of future research, to consider the social isolation hypothesis as unconfirmed (though by no means discredited).

A final hypothesis stemming partly, at least, from ecological researches may be termed the culture conflict thesis. Ruesch et al. (1948) argue that the process of acculturation is one of the prime factors in the etiology of mental disorder. The implication of this thesis is that social disorganization, subcultural conflicts, and the like are critical factors in the causation of mental illness. Thus one would expect a higher proportion of mental illness among immigrant groups, among highly complex cultural groups, among groups undergoing assimilation of new or foreign cultural influences, etc.

In regard to the immigration implication, Tietze et al. found intra-city migration to be more closely related to mental disorder than inter-city migration and conclude that such findings cast doubt on the critical etiological role of environmental change. They point out that if such change were crucial incidence rates should be at least equal in the two groups. Similar findings are reported by Jaco (1954) and by Hollingshead and Redlich (1954a). Further, Goldhamer and Marshall (1953) compared relative incidences of native born and immigrant group psychosis over a considerable period and found no differences.

On the other hand there are some suggestions that mental disorder is less prevalent in homogeneous societies (Weinberg, 1952). Such suggestions are, however, a long way from reliably established (see Linton [1956], for a discussion of this issue). Moreover, Tooth (1950) presents indirect evidence that Westernization does not increase the incidence of psychosis among primitive tribes. While Tooth has been criticized by Carothers (1953), Linton (1956) argues in sympathy with Tooth.

Probably the most significant commentary on the role of "culture conflict" as a determinant of mental disorder is the recent work of Goldhamer and Marshall (1953). It is apparent that the emphasis from the culture conflict point of view is on phenomena connected with social change. It is also apparent that social change marks the history of most cultural groups. Further, at least among European groups, such change tends to be in the direction of increasing social complexity and heterogeneity with perhaps increased opportunities for the operation of "culture conflicts" and the like. Hence it would be expected that *long term* incidence rates of mental disorder would show a steady, concomitant increase. Indeed such a state of affairs is freely assumed. We have already seen that such an assumption formed a basic premise in Frumkin's conclusions concerning the relationship between status and mental disorder. A similar assumption is often implicit or explicit in the thinking of many workers in this general field. It is also true that several surveys of incidence rates afforded some support to this assumption.

Goldhamer and Marshall (1953), however, seriously questioned the reliability of this earlier data on the ground that it embraced too short a time span (generally under 20 years). Therefore, these two investigators set out to explore the issue anew with an unusually extensive, cautious, and carefully thought out study of comparative incidence rates (primarily in Massachusetts) of first admission psychoses over about a 100 year period.

From the results of this research, Goldhamer and Marshall conclude that while there has been "a marked increase in the age-specific admission rates in the older age groups" (presumably as a consequence of an increased tendency to hospitalize persons with mental disorders of the senium) "there has been no long-term increase during the last century in the incidence of the psychoses of early and middle life" (1953, pp. 91–92). There were short-term fluctuations in incidence rates coinciding with marked social changes but there is no evidence to indicate these fluctuations were caused by the social changes per se. No data is reported concerning neurosis though the authors suggest that the same lack of change may be true of them.

In discussing the implications of their findings, Goldhamer and Marshall refer to views of the etiology of psychosis which freely point to "insecurity, competitiveness, status struggle, individuation, anomie, and freedom" (social isolation might well be added) and argue that since these viewpoints emphasize the stresses imposed on man by his social milieu then the results of their investigation indicate either, "(a) that, whatever may be the peculiarities of contemporary life, these stress factors as a total . . .force have not in fact increased during the last century, or (b) that if these factors, which are alleged to have a pathic effect, have increased, they are not as relevant for the theory of the psychoses as has been supposed" (1953, pp. 95–96).

CONCLUSIONS

From the foregoing review of recent literature bearing on the relationship between socio-cultural variables and functional mental disorders, it should be apparent that no definitive conclusion is possible. While it

does seem certain that such variables are indeed co-related, the precise nature of this relationship is manifestly uncertain. The observation of Felix and Kramer (1953, p.5) that "there is a wide gap between the facts that we have now and those we need to have" is inescapable. About all that can be said with real assurance is that great caution should be exercised in attributing any causal or etiological significance to these relationships.

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